INVESTIGATOR'S ANNUAL REPORT

National Park Service

All or some of the information provided may be available to the public

Reporting Year: 1991	**Park:** Shenandoah NP
Principal Investigator: Park Staff <none>	**Office Phone:** (703)999-3493 **Email:** n/a
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Additional investigators or key field assistants (first name, last name, office phone, office email):

No co-investigators

Permit#:
SHEN1991ABAZ

Park-assigned Study Id. #:
unknown

Project Title:
Park Fisheries Monitoring Program

Permit Start Date: Jan 01, 1998	**Permit Expiration Date** Jan 01, 1998
Study Start Date: Jan 01, 1981	**Study End Date** Jan 01, 1999

Study Status:
Completed

Activity Type:
Other

Subject/Discipline:
Fish / Ichthyology

Objectives:
To determine changes in Park fisheries populations.

Findings and Status:

Ten of the west side streams had higher population indices, and 10 streams had lower population indices relative to the results of the 1988 data. There was no apparent correlation or causative factor found between increasing or decreasing streams. It is probable that some brook trout populations are still recovering from the flood/drought events of 1985-88. The west side streams are typically smaller waters, with low summer flows, higher temperatures, and more poorly buffered against acid deposition than streams east of the ridge. The young of the year and 1-year age classes (those fish hatched in the spring of 1989 and 1990) were generally well represented, indicating increased spawning success and survivability since the fall of 1988, when the prolonged drought was broken. Continued favorable stream conditions since that time should be reflected in an increased proportion of spawning-sized fish in 1991, which would be able to fully re-populate the streams.;Average proportions of large spawners (>200 mm) were not different between those streams closed to angling (mean =3.7%, range 0%-13%), and those streams open to angling (mean =3.7%, range 1%-8%). An apparent disproportion (lower than expected) of large fish in several streams suggests possible over-harvest, and should be targeted for increased patrol activities (the East and West branches of Naked Creek, and Pass Run).;No brown trout were detected in the west side streams during the 1990 monitoring efforts.;Efforts were begun to quantitatively monitor populations of black-nosed dace in selected Park streams. Black-nosed dace are known to be among the most sensitive resident fish species to acid deposition. Previous monitoring information on this species has provided presence or absence level data. Density and size/weight data will now be added to this base.;As a result of monitoring information, no changes will be made of streams open or closed to angling for 1991. The list of streams open to angling will be the same as in 1990. All other Park streams remain closed. Monitoring plans for 1991 call for population data gathering from the Park's east side streams.

For this study, were one or more specimens collected and removed from the park but not destroyed during analyses?
No

Funding provided this reporting year by NPS: 15000	**Funding provided this reporting year by other sources:** 0

Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college	
Full name of college or university:	**Annual funding provided by NPS to university or college this reporting year:**
n/a	0